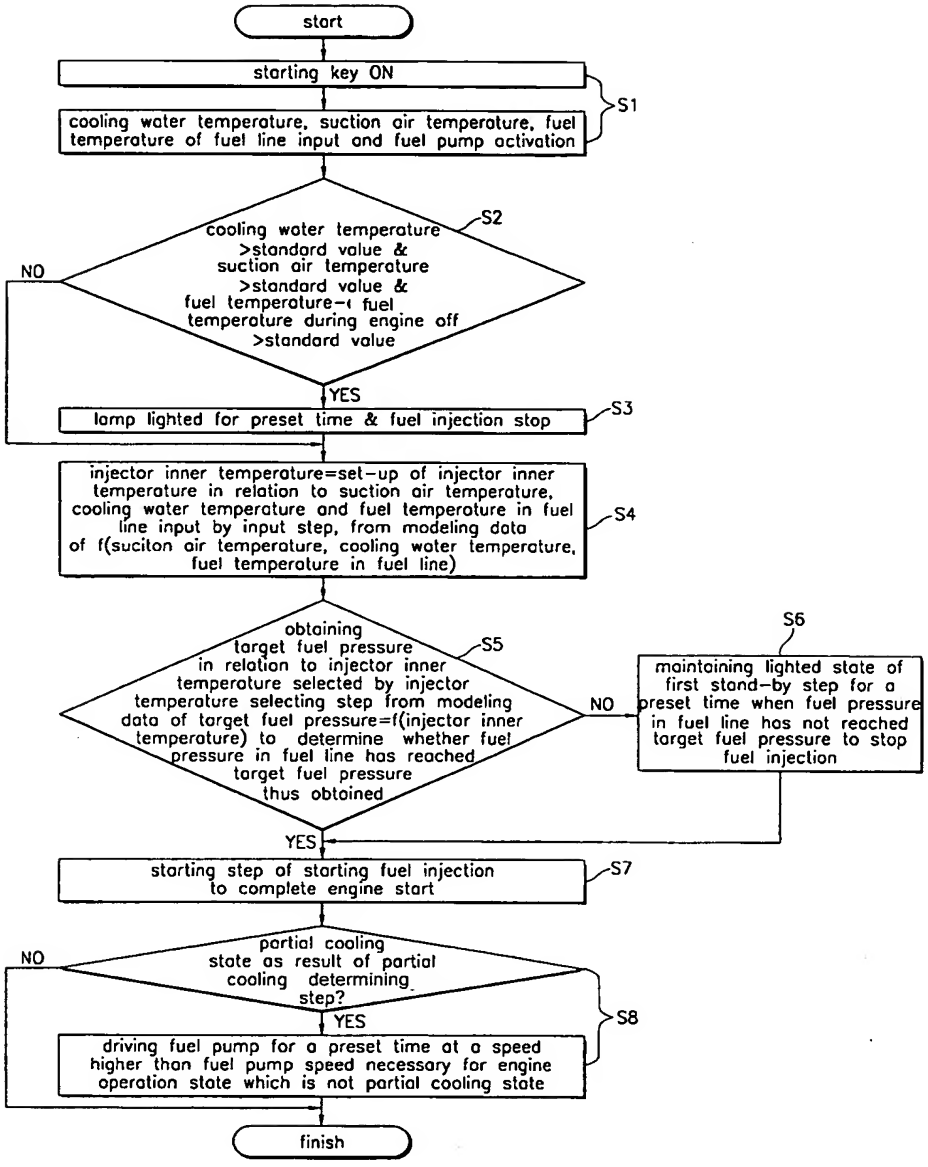
FIG.1


start
starting key ON
S1
cooling water temperature, suction air temperature, fuel temperature of fuel line input and fuel pump activation
S2
cooling water temperature >standard value & suction air temperature >standard value & fuel temperature-(fuel temperature during engine off >standard value
NO
YES
lamp lighted for preset time & fuel injection stop
S3
injector inner temperature=set-up of injector inner temperature in relation to suction air temperature, cooling water temperature and fuel temperature in fuel line input by input step, from modeling data of f(suciton air temperature, cooling water temperature, fuel temperature in fuel line)
S4
obtaining target fuel pressure in relation to injector inner temperature selected by injector temperature selecting step from modeling data of target fuel pressure=f(injector inner temperature) to determine whether fuel pressure in fuel line has reached target fuel pressure thus obtained
S5
NO
S6
maintaining lighted state of first stand-by step for a preset time when fuel pressure in fuel line has not reached target fuel pressure to stop fuel injection
YES
starting step of starting fuel injection to complete engine start
S7
partial cooling state as result of partial cooling determining step?
NO
YES
driving fuel pump for a preset time at a speed higher than fuel pump speed necessary for engine operation state which is not partial cooling state
S8
finish